December 7, 2004

RE: OHIO EPA COMMENTS ON THE DRAFT RI REPORT, CHEMICAL RECOVERY SYSTEMS, ELYRIA, OHIO

Ms. Gwendolyn Massenburg
Remedial Project Manager
U.S. EPA, Region 5 (SR-6J)
77 West Jackson Blvd.
Chicago, IL 60604-3590

Dear Ms. Massenburg:

Below are comments from the Ohio Environmental Protection Agency (Ohio EPA) on the *draft* Remedial Investigation (RI) Report for the above-referenced Superfund site in Elyria, Ohio. The document was received on October 8, 2004, and was submitted to the Agencies on behalf of PARSONS, and the CRS Site Group.

1. What was the fate of the temporary monitoring wells that were dry and did not yield sufficient water for sampling? It was not mentioned or specified in the report, but these points should be properly abandoned, if they are not planned to be used in any additional site characterization activities. It was mentioned on the bottom of page 7 that all borings *not* completed as temporary monitoring points were abandoned with bentonite plug; however, it was not specified how the temporary wells were managed that did not aid in site characterization, due to insufficient water. There were a total of eight (8) temporary monitoring wells installed at the site as part of the RI field work. Of these eight (8) locations, only three (3) yielded sufficient ground water for sampling (GP6, GP14, and GP16). Please clarify the current status of the five (5) "dry" wells. Although Appendix A shows that the borings of GP2, GP9, GP19, GP26, and GP37 were grouted, it should be mentioned in the report.

2. In Section 2.1.1.1 (Soil Boring Installation/Soil Sampling), it is stated that forty (40) total soil borings were advanced at the site using direct push technology. Additionally, five (5) surface soils were also taken from the top of the river bank using a hand auger. Those locations/samples were designated as HA01 - HA05. In Section 4.0 (Nature and Extent of Impact), it is stated that a total of fifty (50) soil borings were installed at the site for soils and ground water characterization. For consistency, it should be stated in Section 2 that an additional five (5) soil borings were installed during the phase II investigation, which evaluated the sewer line. It was confusing to read in Section 2 that forty (40) total soil borings were advanced during the investigation, and in Section 4 it states that fifty (50) total borings were installed for soil and ground water sampling.

3. With respect to Section 4.3 (Ground Water Samples), other than the presence of apparent daughter and breakdown products, can the consultant and Site Group explain more specifically how dissolved oxygen (DO) concentrations, ferrous iron concentrations, and oxidation/reduction values in ground water at the site are favorable for Natural Attenuation (NA). It is also generally stated in Section 5.2 that conditions in ground water at the site are favorable to NA for Volatile Organic Compounds (VOCs) and Semi-Volatile Organic Compounds (SVOCs).

4. Based on the data, Ohio EPA generally agrees that VOC concentrations decrease with depth at the site in the unconsolidated material, and that concentrations in ground water also decrease generally from east to west across the site. It was stated in Section 5.3 (Contaminant Migration) that with the above, and the absence of VOCs in surface water and sediments, it is suggested that there is limited impact from the soil to the ground water pathway. It is Ohio EPA's opinion that there has clearly been an impact to ground water from site soils, but processes of dilution and volatilization are acting as significant contributors to the lack of VOCs detected in surface waters and sediments adjacent to the site.

5. With respect to Section 7.0 (Summary and Conclusions), in Section 7.1.3 (Risk Assessment, Human Health), page 27 of 29, there is a discrepancy with the information presented in this section versus that described in Section 6. Specifically, in Section 6 (1st bullet, page 25 of 29), it is stated that the **total cancer risk** and **Hazard Index (HI)** from exposure to Chemicals of Potential Concern (COPC) in soil for a future commercial worker was calculated to be 3×10^{-4} and 23, respectively. In section 7.1.3, these calculations for a future commercial worker were reportedly calculated to be 4×10^{-4} and 10, respectively, for **total cancer risk** and the **HI**. Please clarify or correct.

6. Also regarding Section 7.0, the Contaminants of Concern (COC's) are not consistent in their listing with Section 6 and Section 7. In Section 6 for a future commercial worker, the COC's were listed as Arsenic (As), benzene, benzo(a)anthracene, benzo(a)pyrene, benzo(b)flouranthene, dibenzo(a,h)anthracene, tetrachloroethene (PCE), trichloroethene (TCE), and xylenes. However, in Section 7.1.3, the COC's listed for a future commercial worker are listed as Aroclor 1242, Aroclor 1254, benzo(a)pyrene, TCE, and PCE. The pathway of soil volatilization was also not mentioned in Section 7.1.3, but was listed in Section 6 for this scenario.

7. Similarly, for a future construction worker, the **total cancer risk** and **HI** described in Section 6 of the document were listed as 2×10^{-5} and 3, respectively. In Section

7.1.3 for this exposure scenario, the **total cancer risk** and **HI** is listed as 4×10^{-5} and 8, respectively. The COC's for this scenario listed in Section 6 were listed as benzo(a)pyrene, dibenzo(a,h)anthracene, and TCE. However, in Section 7.1.3, the COC's for the future construction worker were Antimony (Sb), benzo(a)pyrene, PCE, TCE, and xylenes. Please clarify these discrepancies.

8. Regarding the potential exposure to a future trespasser, although the **total cancer risk** and **HI** were below the targets of 10^{-5} and 1, respectively, the **HI** was different for this scenario in Sections 6 and 7. The **HI** for this potential exposure scenario was listed as 0.3 in Section 6, but listed as 0.7 in Section 7.1.3. Please clarify or correct.

9. With respect to Table 4-1 (Soil Results Above Action Levels), results for boring GP-39 showed a high Method Detection Limit (MDL) for VOC's, so it is difficult to assess whether other VOC's present in soils at this location were above project Action Levels. Also, MDL's were elevated for SVOC's and well above project Action Levels in borings GP-44 and GP-20. High MDL's were also noted for PCB's and above project Action Levels for boring GP-41. These were likely attributable to high matrix interferences and, despite this, Ohio EPA finds the overall site data to be adequate and sufficient to make risk management and remedial decisions, based on the number of samples collected at the site.

10. Also in Table 4-1 (Soil Results Above Action Levels), dibenzo(a,h)anthracene was shown as being detected at an estimated concentration of 8.1 mg/Kg. However, no sample identification or location was associated with this result in the table. This is also the case with Indeno(1,2,3-cd)pyrene, which was detected at 29 mg/Kg. Sample identifications, locations, and intervals sampled should be associated with the findings for these samples.

11. Regarding Table 2 of Appendix D, the MDL's were above project Action Levels for ground water in samples GP-06, GP-14, GP-16, and MW6 for VOC's, so it is not known if other VOC's are present in ground water at these locations above Action Levels. For SVOC's, the elevated MDL for MW6 does not appear to be a problem, because other SVOC detections were not present spatially in ground water at locations with lower and more acceptable MDL's.

Specific Comments on the Human Health Risk Assessment (Appendix F):

1. **Section 1** (Executive Summary), **Page 1** (Risk Goal): The carcinogenic risk goal for the Site complies with Ohio EPA's Division of Emergency and Remedial Response's (DERR) risk goal of 10^{-5}, versus the risk range recommended by the

NCP of 10^{-4} - 10^{-6}. Ohio EPA would like to verify if this is acceptable to the U.S. EPA. Note that the use of 10^{-5} is more protective at this stage in the process when assessing risk. When setting remedial levels in the Feasibility Study (FS) and beyond, however, U.S. EPA's OSWER policy recommends a departure point of 10^{-6}, which is more protective at that stage. No changes are required unless requested by U.S. EPA.

2. **Section 2** (Background Information), **Page 3** (Potential Areas of Concern): Only 4 drum storage areas are identified in Figures 2 and 3, not the 5 identified in Section 2.3.3.

   Also, would there be a difference in contaminant releases/concentrations between the former and remaining parts of the Rodney Hunt Still Building? As reference, adjacent borings (GP19, GP20, and GP34) showed exceedances of Region 9 PRG's in shallow soils for TCE, PCE, Arsenic, benzo(a) pyrene, benzo(b) flouranthene, and benzo(a) anthracene. Also, only shallow ground water is identified as an "area" of concern. Since the deeper wells are contaminated (though comparatively much less), it would be advisable to briefly discuss it in this section.

3. **Section 3** (Chemical Characterization), **Page 10** (Screening Methodology): Related to the previous comment on the risk goal, if the site risk goal is set at 10^{-5}, then the screening carcinogenic PRG may be set at 10^{-6}. If the site risk goal is set at 10^{-6}, then no change in the screening carcinogenic PRGs is necessary. Also, please add a footnote that the October 2002 PRGs have been used, and not the (new) October 2004 PRGs (which were released after the draft risk assessment was generated). No changes are required unless requested by the U.S. EPA risk assessor.

4. **Section 4** (Exposure Assessment), **Page 13** (Exposure Route): Surface water was considered a minimal exposure medium, as ground water impacts on surface water (seeps) were not observed during a site visit. However, even if there are no visual impacts, ground water may be recharging or otherwise impacting surface water. This section should be revised and surface water (and sediment) should be evaluated. However, depending on the upgradient versus site-related COCs in surface water (and sediment) and limited exposure of receptors, a full quantitative evaluation may not be necessary. (See comments below, also.)

5. **Page 15** (Ground Water Assessment): Ground water as a *future* potable source has not been evaluated (though it has been assessed for indoor air impacts). Generally, this non-assessment is based on hydrogeological factors, such as yield/quantity. Also, is the Site located within an Urban Setting Designation (USD)?

While the USD may not be applicable to the Site under orders with U.S. EPA, an USD does document the limited potential for future use of ground water. If U.S. EPA concurs, it is not necessary to do a quantitative evaluation of potable ground water use, but a better justification for non-evaluation should be provided.

6. **Table 3** (Ground Water Analytical Results): Are the data from the temporary wells treated in the same way as the data from the shallow and intermediate wells? Also, note that for some COCs (example, benzene, trichloroethene), the detection limits are higher than the PRGs and, so, a non-detect (ND) value in a specific well may not be a true indicator. Certain wells (MW-6) also have high detection limits, perhaps because of matrix interferences/data quality issues.

7. **Table 6** (Soil COCs Occurrence and Distribution): The risk assessment follows standard practices and uses a central tendency value (95% UCL of the mean) to evaluate certain COCs. However, this approach may mask certain areas of higher contamination. For example, Arochlor 1242 was detected at 79 ppm (GP-41, 0-2 feet) and Arochlor 1254 was found at 65 ppm (GP-44, 0-2 feet), along the soil sampled along the former storm sewer line. Arsenic was found in subsurface soil at 228 ppm. At a minimum, a conceptual site model (figures) of the contaminant concentrations in the different media is advisable, or add a reference to such figures in the Risk Assessment. If active remediation is envisaged, it may be advisable to characterize these areas of higher contamination to better focus the remedial process.

8. **Table 10** (Page 2 of 4): The Exposure Point Concentration (EPC) and maximum concentrations for antimony and arsenic appear to be reversed.

9. **Table 18**. Note that the risk calculated for TCE is based, per U.S. EPA's current recommendation, on older toxicity studies. It is possible that when the toxicity re-evaluation of TCE is complete, the risk may be assessed higher. No change is required in the risk assessment unless an interim TCE value is provided by U.S. EPA.

Specific Comments on the Ecological Risk Assessment (Appendix G):

1. **Page 1** (Executive Summary): Please update this section based on the specific comments below.

2. **Pages 3, 6, 8** (Aquatic life): A more detailed discussion of the aquatic impacts should be conducted. Minimally, the information in the Black River RAP referred to should be discussed, with the focus on site-related contamination. Specifically, the

surface water and sediment results should be discussed in the context of what is attributable to the site versus upgradient sampling. Note that the aquatic life use designation(s) are ARARs, and will need to be evaluated as part of the FS.

3. **Page 5, Table 1** (Soil COCs identification): Another resource is the Ecological Soil Screening Levels (EcoSSLs). These are screening levels for inorganics that are protective of different trophic levels (see: http://www.epa.gov/ecotox/ecossl/). Also, effects on terrestrial vegetation are not evaluated, but a clear rationale has not been presented in this section. This rationale should be added. However, if it is believed that from a future use standpoint, terrestrial vegetation needs to be evaluated in specific areas of the site (for example on the river bank), the assessment should be updated to include the terrestrial plants screening levels (see: http://www.hsrd.ornl.gov/ecorisk/tm85r3.pdf).

4. **Page 6** [Ohio EPA Division of Surface Water(DSW) standards]: These standards have been updated (8/5/04). Generally, the Outside Mixing Zone Average (OMZA) and not the OMZM standards are used to evaluate any impacts to surface water at DERR sites; although, both can be presented. Ohio EPA's DSW's current approach is not to allow a mixing zone for non-point source discharges. Please revise this section and associated tables.

5. **Table 1** (Soil Screening Levels): There is an error in the screening benchmarks comparison presented for some COCs - the PCB benchmarks are presented as ppb (µg/kg), but the site concentrations are in ppm (mg/kg) and, so, specific Arochlors should not be screened out of consideration. Also, the screening level for 2-hexanone is 1.26E+04 ppb, and not 8.96E+04 ppb. Please revise the table.

   Please note that generally, the screening levels are segregated on the basis of receptors (plants, terrestrial organisms, etc.). Persistent, bioaccumulative toxic (PBT)chemicals, such as PCBs, should not be screened out, unless the screening levels used are protective of higher trophic level receptors.

6. **Table 2** (Sediment Screening): Please check the table. On spot-checking, Antimony does not appear in the MacDonald paper.

7. **Table 3** (Surface Water Screening): Please refer to previous comments on the use of the OMZM versus OMZA and available updated (8/5/04) DSW standards.

Comments Deferred to U.S. EPA Risk Assessor:

1. Table 11: Physio-chemical Properties (differs slightly depending on the source used).

2. Table 13: Inhalation rate(s); Exposure Frequency for construction workers. Ohio EPA has generally used 120 days/year, rather than 90); Exposure Frequency for trespassers (12 days); use of BUSTR and ASTM default values rather than U.S. EPA.

3. Table 17: HI segregation based on primary target organ(s) - this is something rarely done at our sites, and we have sometimes requested that secondary effects also be considered in the segregation.

If you have any questions, please contact me at (330) 963-1127.

Sincerely,

Lawrence Antonelli
Site Coordinator
Division of Emergency and Remedial Response

LA/kss

ec: Steve Love, Ohio EPA, DERR, NEDO
Sheila Abraham, Ohio EPA, DERR, NEDO